

CLEAN VERSION OF CLAIMS

- Sub 1
B
- a!
1. A readout controlling apparatus for controlling reading conditions while reading data from a recording medium, comprising:
 - an error correcting means for correcting errors in said read data;
 - an error rate calculating means for calculating an error rate of said errors in said read data; and
 - a control means for controlling an amount of light from a laser diode used in reading said data, or a frequency of a signal superimposed on a signal applied to the laser diode or an amplitude of the signal superimposed on the signal applied to the laser diode, based on the calculated error rate in order to reduce the error rate.
 2. A readout controlling apparatus as set forth in claim 1, wherein:
 - said data is coded in units of code blocks; and
 - said error correcting means corrects errors in said code blocks;
 - said error rate calculating means calculates said error rate by either determining a number of bytes of data where said error correction was correctly carried out and a number of bytes of data wherein said error correction was not correctly carried out, or a number of code blocks wherein said error correction was correctly carried out, and a number of blocks wherein said error correction was not correctly carried out.
 3. A readout controlling apparatus as set forth in claim 2, wherein
 - said error rate calculating means calculates said error rate by using either cumulative addition of the number of bytes of data wherein said error correction was correctly carried out, and the number of bytes of data wherein said error correction was not correctly carried out, or the number of code blocks wherein said error correction was

correctly carried out, and the number of blocks wherein said error correction was not correctly carried out for at least one code block.

5. A readout controlling apparatus as set forth in claim 2, wherein:

said data comprises information arranged in rows and columns, and further wherein an inner code parity is determined for the rows, and an outer code parity is determined for the columns and

said error correcting means performs inner code error correction using said inner code parity and outer code error correction using said outer code parity.

6. A readout controlling apparatus as set forth in claim 5, further comprising:

a memory means for storing the results of cumulative addition of said inner code error corrections and

a memory means for storing the results of cumulative addition of said outer code error corrections.

7. A readout controlling apparatus as set forth in claim 6, wherein said error rate

calculating means reads the cumulative addition values stored in the memory means.

10. A readout controlling apparatus for controlling reading conditions while reading data from a recording medium, comprising:

a reproducing means for reproducing data from a recording medium;

an error correcting means for correcting errors in said reproduced data;

an error rate calculating means for calculating an error rate; and

a control means for controlling a focus of light employed in reproducing said data, based on the calculated error rate in order to reduce the error rate.

11. A readout controlling apparatus as set forth in claim 10, wherein:

said data is coded in units of code blocks;

said error correcting means corrects errors in said code blocks; and

said error rate calculating means calculates said error rate by using either determination of the number of bytes of data where said error correction was correctly carried out, and the number of bytes of data wherein said error correction was not correctly carried out, or determination of the number of code blocks wherein said error correction was correctly carried out, and the number of blocks wherein said error correction was not correctly carried out.

12. A readout controlling apparatus as set forth in claim 11, wherein:

said error rate calculating means calculates said error rate by using either cumulative addition of the number of bytes of data wherein said error correction was correctly carried out, and the number of bytes of data wherein said error correction was not correctly carried out, or the number of code blocks wherein said error correction was correctly carried out, and the number of blocks wherein said error correction was not correctly carried out for at least one code block.

14. A player as set forth in claim 11, wherein:

said data comprises information arranged in rows and columns, and further wherein an inner code parity is determined for the rows, and an outer code parity is determined for the columns and

said error correcting means performs inner code error correction using said inner code parity and outer code error correction using said outer code parity.

15. A player as set forth in claim 14, further comprising:

a memory means for storing the results of cumulative addition of said inner code error corrections and

a memory means for storing the results of cumulative addition of said outer code error corrections.

16. A player as set forth in claim 15, wherein said error rate calculating means reads the cumulative addition values stored in the memory means.

17. A recorder for recording data on a storage medium, comprising:
a reading means for reading recorded data;
an error correcting means for correcting errors in data read by the reading means;

an error rate calculating means for calculating an error rate; and

a control means for controlling one or more of the following recording characteristics: an amount of light generated from a laser diode used during recording; a frequency of a signal superimposed on a signal applied to the laser diode; and amplitude of the signal superimposed on the signal applied to laser diode; a focus of light used in recording; RF signal characteristics; an inclination of an optical recording medium and/or a speed of said recording medium.

20. A readout controlling method for controlling reading conditions while reading data from a recording medium comprising the steps of:

applying error correction to data read from the recording medium;

calculating an error rate of said error correction step; and

controlling a gain of a photodiode employed for reading data from the recording medium so that said error rate becomes small.

AI can't sub 24. A method for controlling reading conditions while reading data from a recording medium comprising the steps of:

applying error correction to data read from the recording medium;

calculating an error rate of said error correction step; and

controlling filter characteristics of a filter employed for reading data from the recording medium so that said error rate becomes small.

25. A method for controlling reading conditions while reading data from a recording medium comprising the steps of:

applying error correction to data read from the recording medium;

calculating an error rate of said error correction step; and

controlling RF signal characteristics of a signal used for reading data from the recording medium so that said error rate becomes small.

26. A method for controlling reading conditions while reading data from a recording medium comprising the steps of:

applying error correction to data read from the recording medium;

calculating an error rate of said error correction step; and
controlling the inclination of a disk storage member so that said error rate
becomes small.

27. A method for controlling reading conditions while reading data from a
recording medium comprising the steps of:

applying error correction to data read from the recording medium;

calculating an error rate of said error correction step; and

controlling the relative speed of the recording medium so that said error rate

becomes small.

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail on October 16, 2002 in an envelope addressed to:

**Box Fee Amendment
Commissioner For Patents
Washington, D.C. 20231**



Attorney for Applicants

CHI1 #182857 v2